

Fig. 1

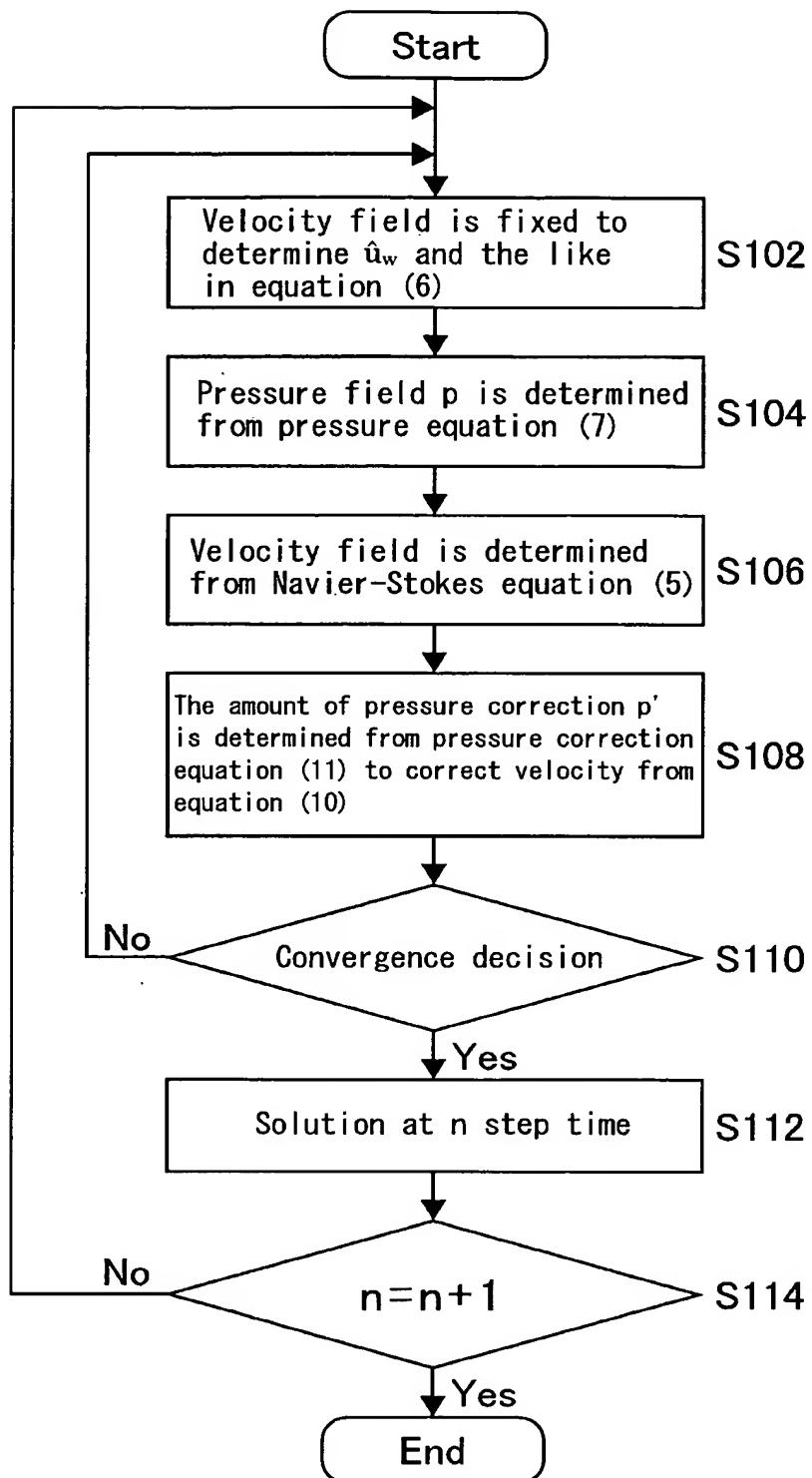


Fig. 2

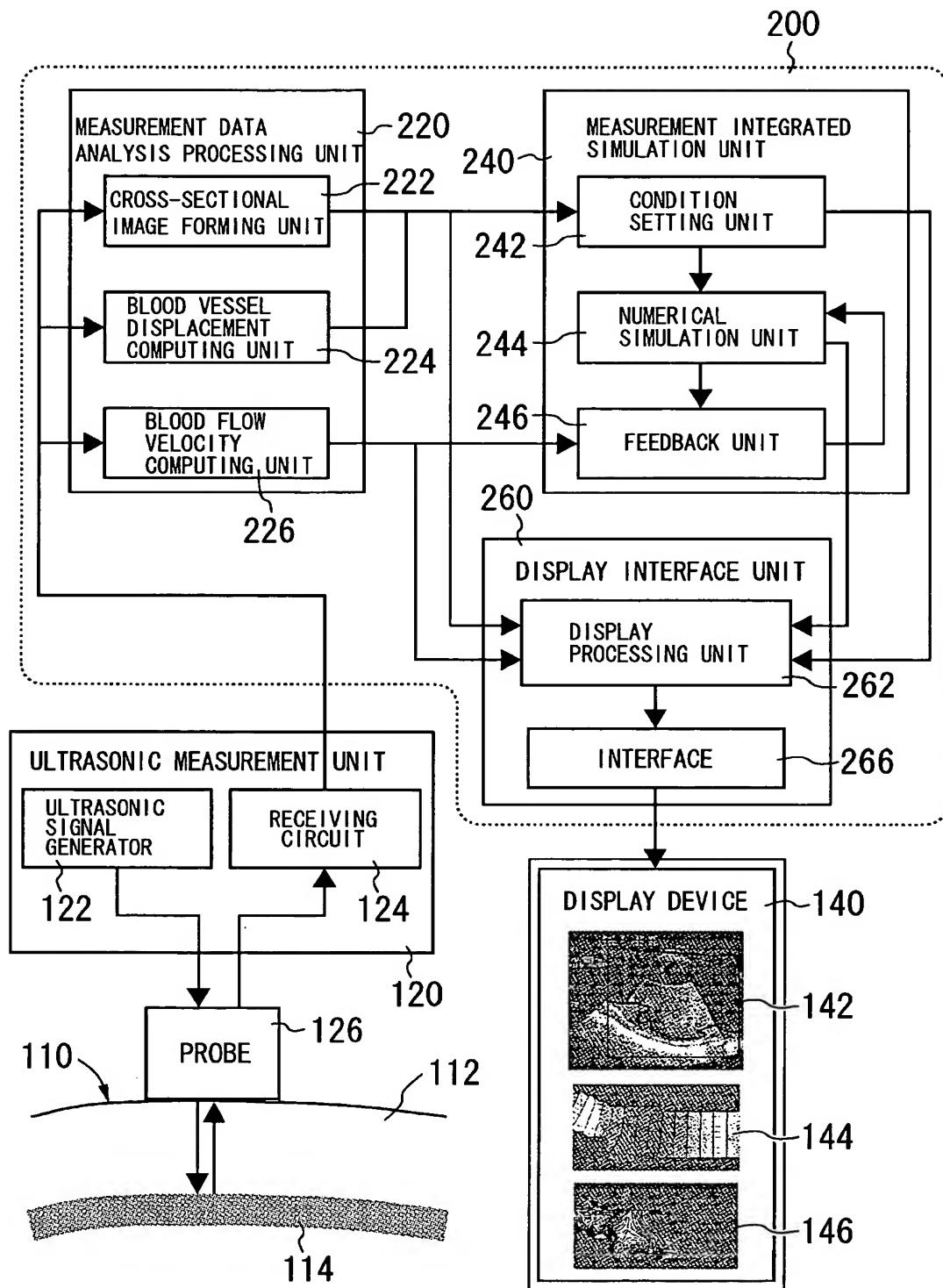


Fig. 3

Display example of color Doppler image

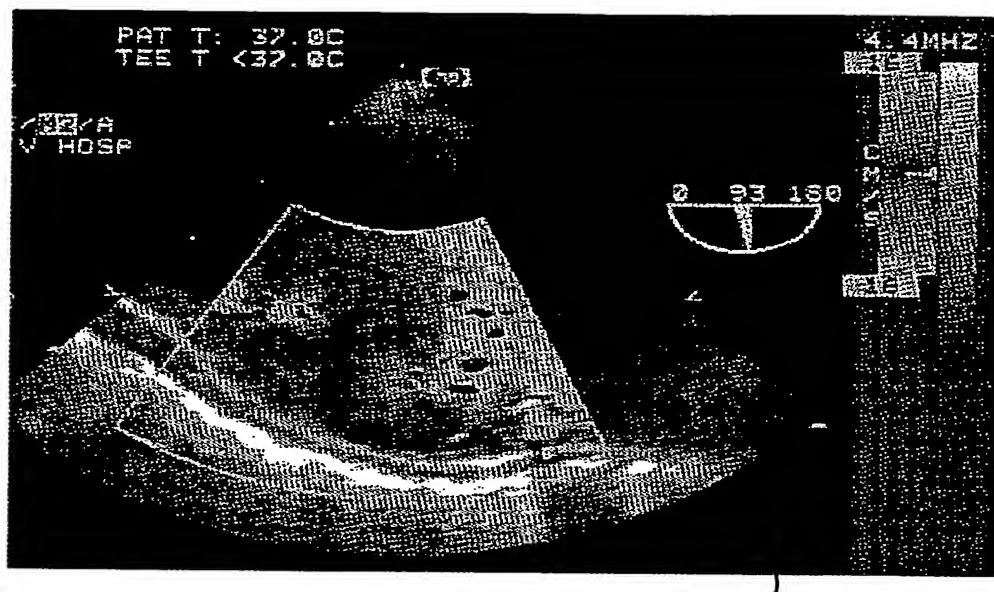


Fig. 4

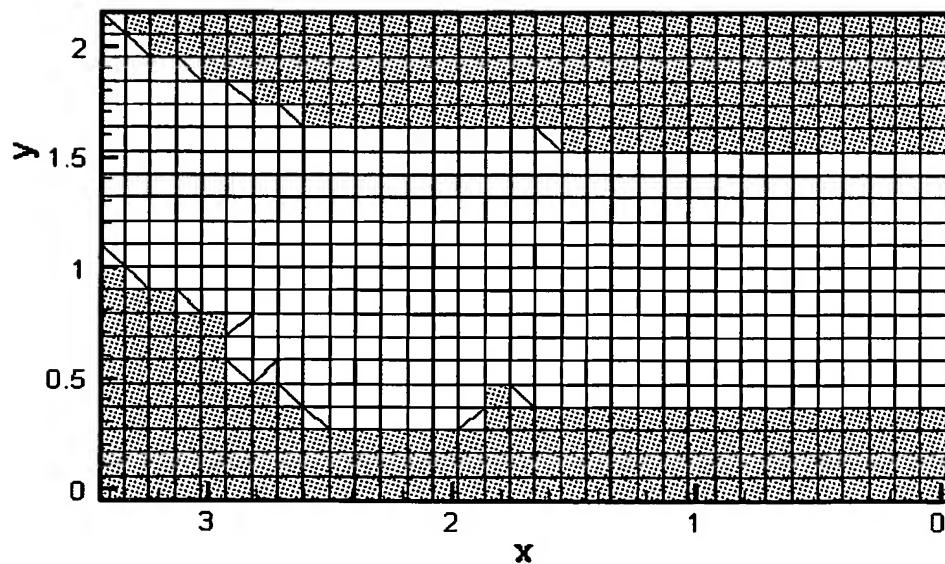
Computational lattices
for measurement integrated simulation (32 by 20)

Fig.5

Uniform velocity boundary condition
on upstream side of blood vessel

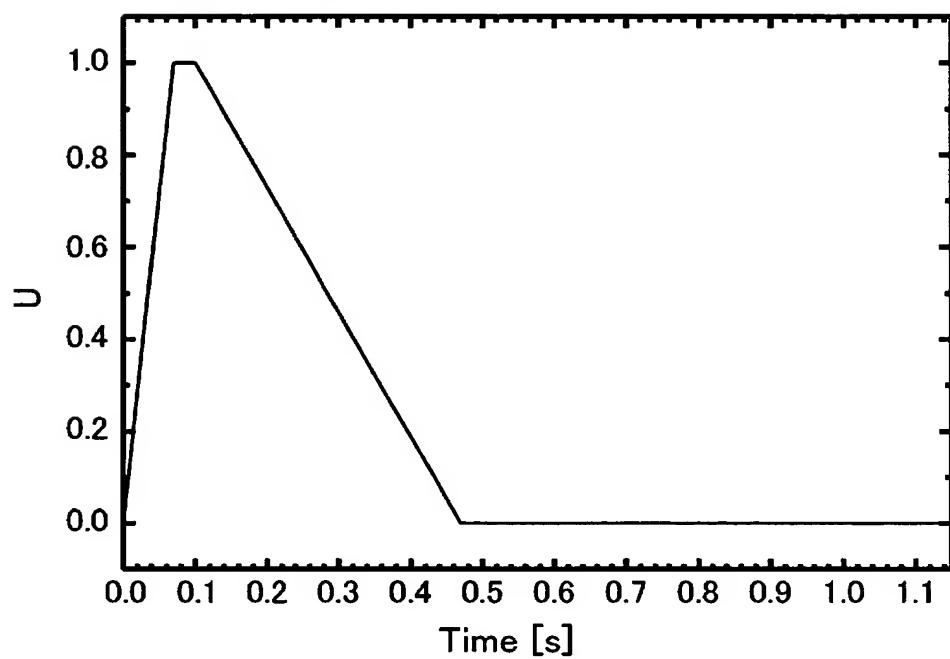


Fig. 6

Definition of representative points

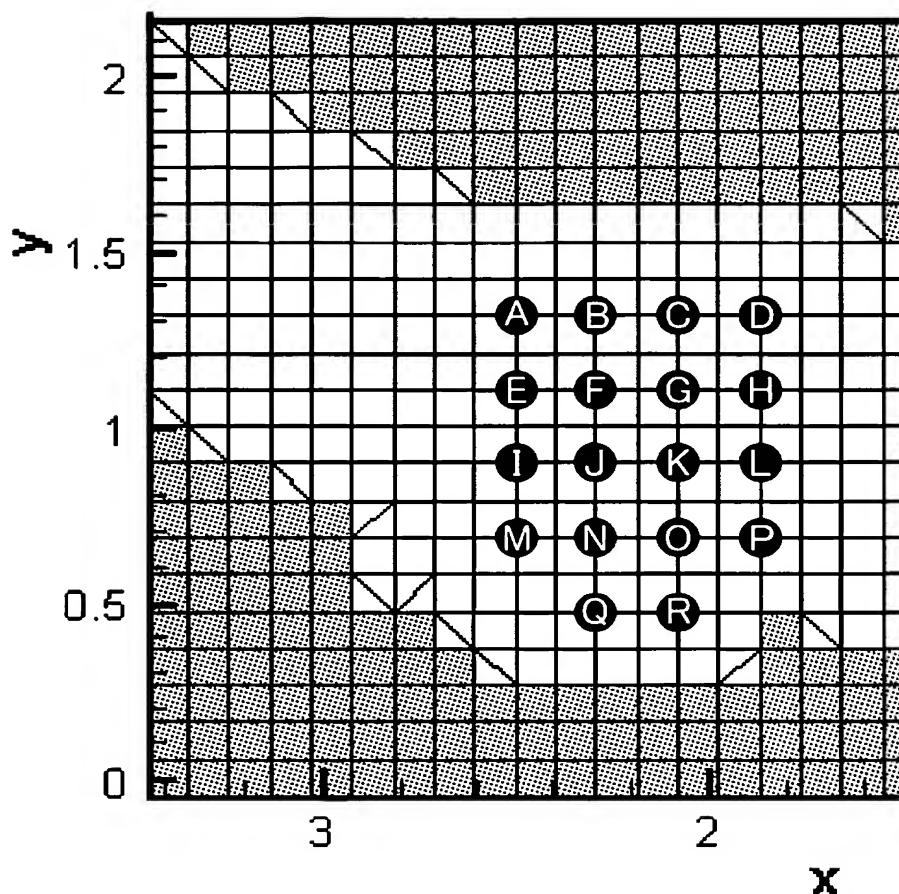
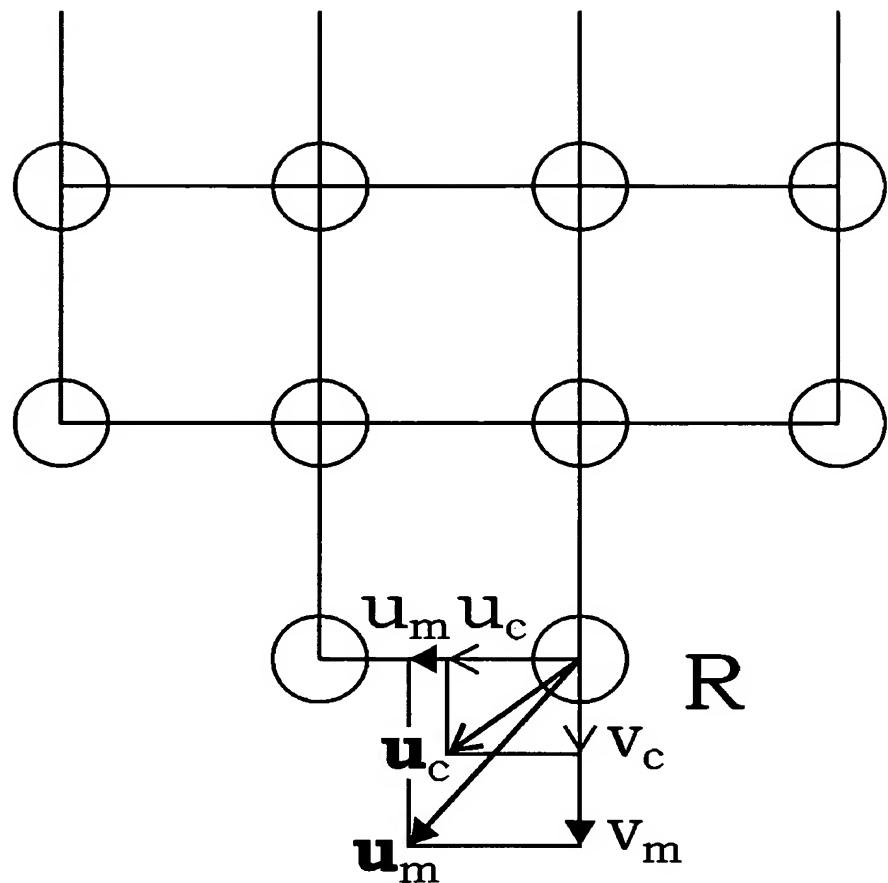


Fig. 7

Explanatory view of feedback



$$\mathbf{f} = -K \left(\frac{\mathbf{u}_c \circ \mathbf{u}_m}{|\mathbf{u}_m|^2} - 1 \right) \mathbf{u}_m$$

Fig. 8

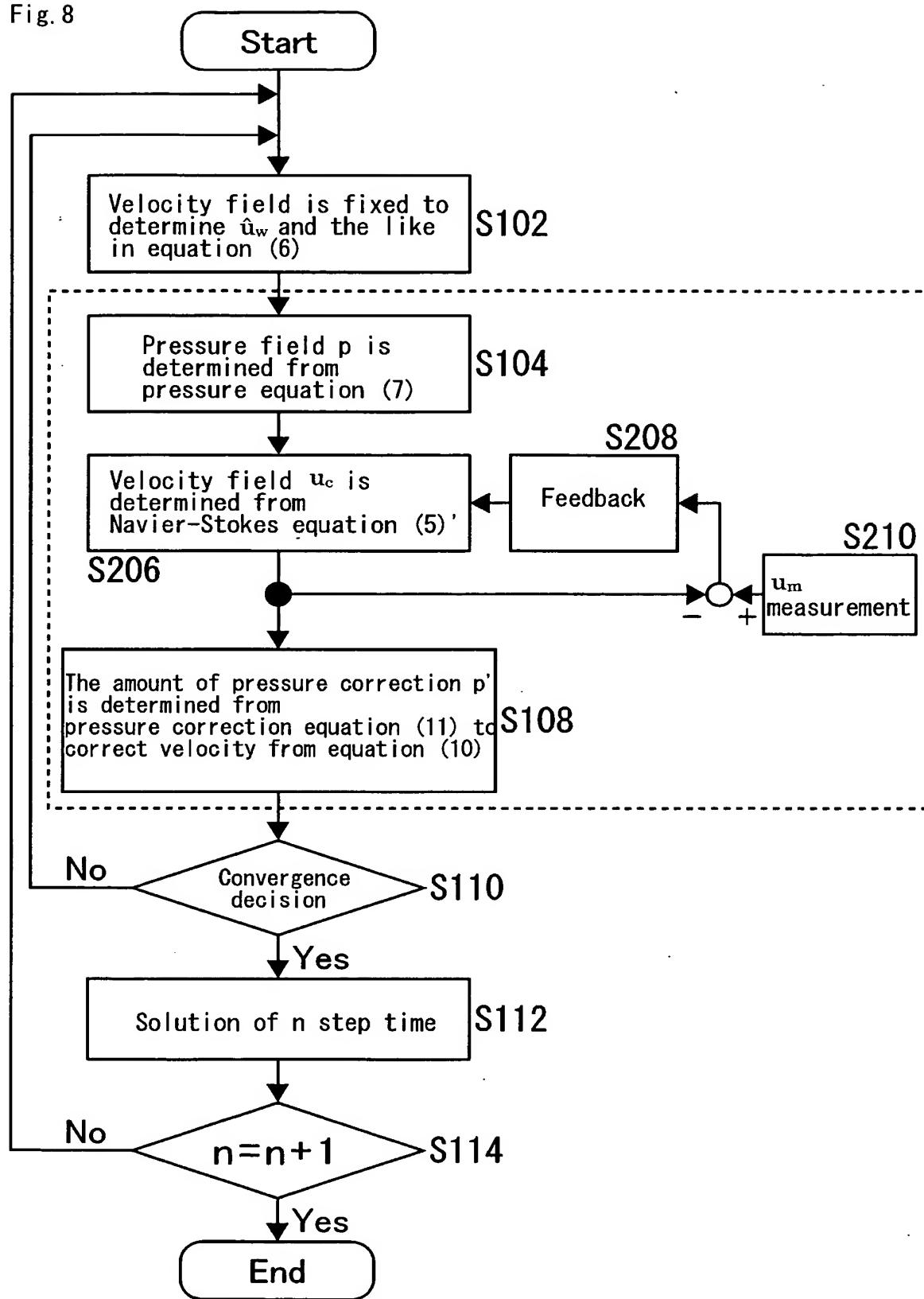


Fig. 9A

Result of measurement integrated simulation ($t=0.2s$)

Velocity vector and pressure distribution
in blood vessel

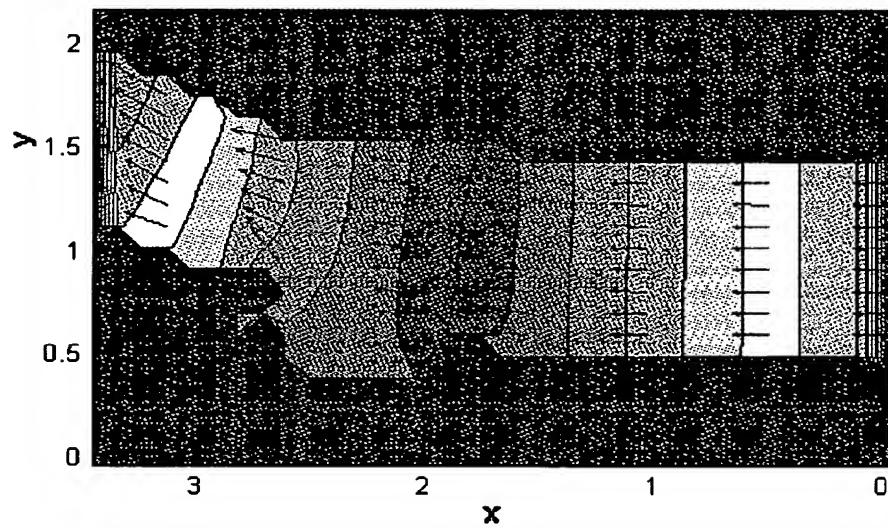


Fig. 9B

Result of measurement integrated simulation ($t=0.2s$)

Display of color Doppler image

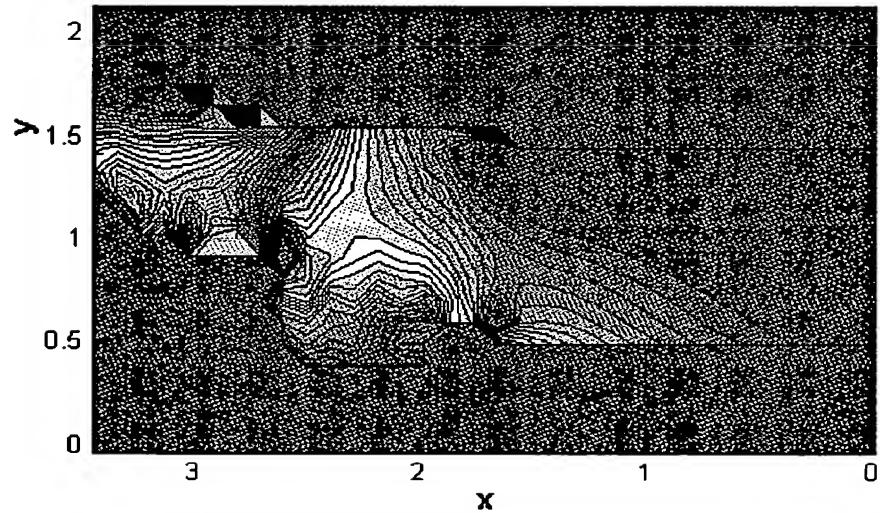


Fig. 10A

Comparison of arithmetic accuracy between measurement integrated simulation and numerical simulation (comparison at representative point R)

Time change of u velocity component

Comparison of x-direction velocity component

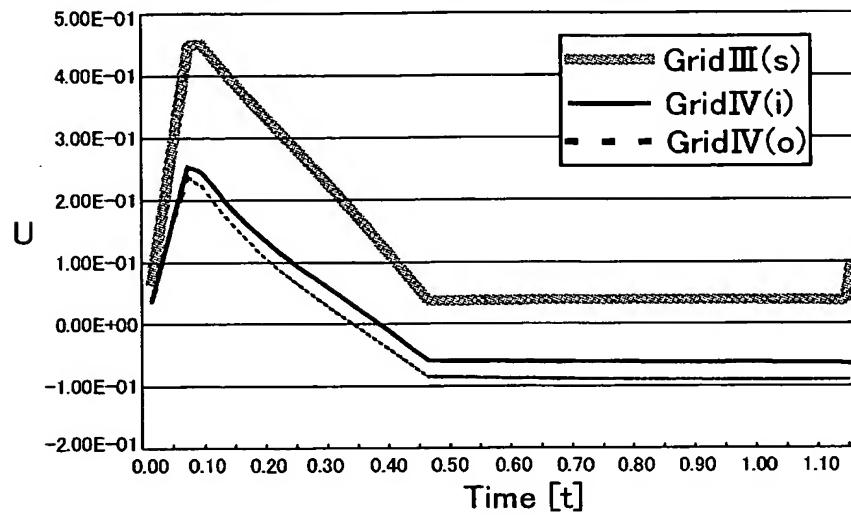


Fig. 10B

Comparison of arithmetic accuracy between measurement integrated simulation and numerical simulation (comparison at representative point R)

Time change of v velocity component

Comparison of y-direction velocity

